68. (New) The article of claim 65, wherein the first surface has a surface area that is at least 2.5 times the theoretical area of a smooth, non-reticulating configuration.

69. (New) The article of claim 65, wherein the first surface has a surface area that is at least 3 times the theoretical area of a smooth, non-reticulating configuration.

70. (New) The article of claim 65, wherein the first surface has a surface area that is at least 4 times the theoretical area of a smooth, non-reticulating configuration.

71. (New) The article of claim 65, wherein the first surface has a surface area that is at least 5 times the theoretical area of a smooth, non-reticulating configuration.

72. (New) The article of claim 65, wherein the cross-sectional width *a* of the protrusion increases at cross-sections approaching the base of the first electrode.

73. (New) The article of claim 65, wherein a cross-sectional area of the protrusion at a first position near to the base of the first electrode is greater than a cross-sectional area of the protrusion at a second position that is farther from the base.

74. (New) The article of claim 74, wherein the electrical conductivity increases at cross-sections approaching the base of the first electrode.

75. (New) The article of claim 74, wherein the electrical conductivity increases at cross-sections approaching the base of the first electrode.

76. (New) The article of claim 65, wherein the opposing electrode has a smooth, non-reticulating surface.

77. (New) The article of claim 65, wherein the opposing electrode has a base and a second surface, reticulated so as to define a plurality of protrusions and intervening indentations providing a surface area at least 1.5 times the theoretical surface area of a smooth non-reticulating surface, wherein the protrusions have a length *m* and a cross-sectional thickness *b*.

78. (New) The article of claim 65, wherein the opposing electrode has a base and a second surface, reticulated so as to define a plurality of protrusions and intervening indentations providing a surface area at least 1.5 times the theoretical surface area of a smooth non-reticulating surface, wherein the protrusions have a length *m* and a cross-sectional thickness *b* and wherein the cross-sectional thickness *b* varies along the length *m* of the protrusion.

79. (New) The article of claim 78, wherein the second surface has a surface area at least 2 times the theoretical surface area of a smooth non-reticulating surface.

80. (New) The article of claim 78, wherein the second surface has a surface area at least 2.5 times the theoretical surface area of a smooth non-reticulating surface.

81. (New) The article of claim 78, wherein the second surface has a surface area at least 3 times the theoretical surface area of a smooth non-reticulating surface.

82. (New) The article of claim 78, wherein the second surface has a surface area at least 3.5 times the theoretical surface area of a smooth non-reticulating surface.

83. (New) The article of claim 78, wherein the second surface has a surface area at least 4 times the theoretical surface area of a smooth non-reticulating surface.

84. (New) The article of claim 78, wherein the second surface has a surface area at least 5 times the theoretical surface area of a smooth non-reticulating surface.

85. (New) The article of claim 78, wherein the protrusions of the second reticulating surface are positioned periodically, aperiodically or randomly.

86. (New) The article of claim 78, wherein the cross-sectional width *b* of the protrusion increases at cross-sections approaching the base of the opposing electrode.

87. (New) The article of claim 78, wherein a cross-sectional area of the protrusion at a first position near to the base of the first electrode is greater than a cross-sectional area of the protrusion at a second position that is farther from the base.

88. (New) The article of claim 78, wherein the cross-sectional area of the protrusions of the second reticulating surface increases at cross-sections approaching the base of the opposing electrode.

89. (New) The article of claim 88, wherein the electrical conductivity increases at cross-sections approaching the base of the opposing electrode.

90. (New) The article of claim 78, wherein the first and second reticulating surfaces are interpenetrating.

91. (New) The article of claim 78, wherein the second reticulating surface of the opposing electrode is complementary to the first reticulating surface of the first electrode.

92. (New) The article of claim 90 or 91, wherein the average distance between complementary reticulating surfaces is less than 100 microns.

93. (New) The article of claim 90 or 91, wherein the average distance between complementary reticulating surfaces is less than 50 microns.

94. (New) The article of claim 90 or 91 wherein the average distance between complementary reticulating surfaces is less than 25 microns.

95. (New) The article of claim 90 or 91, wherein the average distance between complementary reticulating surfaces is less than 10 microns.

96. (New) The article of claim 78, further comprising an electrolyte positioned between the complementary first and second reticulating surfaces.

97. (New) The article of claim 65, wherein the first electrode is porous.

98. (New) The article of claim 97, wherein the opposing electrode is porous.

99. (New) An electrode comprising a framework having an ionically interconnected porous network, wherein the porous network has a porosity density that varies from a first end to a second end.

100. (New) The electrode of claim 99, wherein the porosity density is at least less than 10% from an average porosity density at the first end.

101. (New) The electrode of claim 100, wherein the porosity density is at least greater than 10% from an average porosity density at the second end.

102. (New) The electrode of claim 98, wherein the porosity density varies from the first end to the second end by more than about 5%.

103. (New) An article comprising:

a first electrode having a base and a first surface for positioning proximate to an opposing electrode, the first surface being reticulated so as to define a plurality of protrusions and intervening indentations providing a surface area at least 1.5 times the theoretical surface area of a smooth non-reticulating surface, wherein the electrical conductivity increases at cross-sections approaching the base of the first electrode.

104. (New) The article of claim 103, wherein the protrusions are positioned periodically, aperiodically, or randomly on the first reticulating surface.

105. (New) The article of claim 103, wherein the first surface has a surface area that is at least 2 times the theoretical area of a smooth, non-reticulated configuration.

106. (New) The article of claim 103, wherein the first surface has a surface area that is at least 2.5 times the theoretical area of a smooth, non-reticulating configuration.

107. (New) The article of claim 103, wherein the first surface has a surface area that is at least 3 times the theoretical area of a smooth, non-reticulating configuration.

108. (New) The article of claim 103, wherein the first surface has a surface area that is at least 4 times the theoretical area of a smooth, non-reticulating configuration.

109. (New) The article of claim 103, wherein the first surface has a surface area that is at least 5 times the theoretical area of a smooth, non-reticulating configuration.

110. (New) An energy storage device, comprising:

a first electrode;

a second electrode;

a first current collector in electronic communication with the first electrode;

a second current collector in electronic communication with the second electrode; and

an electrolyte in ionic communication with the first and second electrodes, wherein at least one of the first and second electrodes includes a portion having an ionically interconnected porosity that increases in a direction from the current collector with which the electrode is in electrical communication toward the other electrode or current collector.

111. (New) The energy storage device of claim 110, further comprising a porous separator separating the first electrode and second electrode, the liquid electrolyte permeating the separator and at least a portion of the porous portion of the first electrode.

112. (New) The energy storage device of claim 110, wherein the first and second electrodes each include a porous portion adapted to receive the liquid electrolyte, each of the first and second electrodes having a porosity that increases in a direction toward the other electrode.

113. (New) The energy storage device of claim 110, wherein at least one of the first and second electrodes has a porous portion with an average porosity of from about 10 to about 70%.

114. (New) The energy storage device of claim 110, wherein at least one of the first and second electrodes has a porous portion with an average porosity of from about 20 to 50%.

115. (New) The energy storage device of claim 110, wherein at least one of the first and second electrodes has a porous portion with an average porosity of from about 30 to 45%.

116. (New) The energy storage device of claim 110, the first electrode having a porous portion with an average porosity and a porosity gradient in a direction from the first current collector toward the second electrode, wherein the porosity at each extreme of the gradient is at least 10% different from the average porosity.

117. (New) The energy storage device of claim 110, at least one of the first and second electrodes having a porous portion with an average porosity and a porosity gradient in a direction from

the current collector with which the electrode is in electrical communication toward the other electrode, wherein the porosity at each extreme of the gradient is at least 20% different from the average porosity.

118. (New) The energy storage device of claim 110, at least one of the first and second electrodes having a porous portion with an average porosity and a porosity gradient in a direction from the current collector with which the electrode is in electrical communication toward the other electrode, wherein the porosity at each extreme of the gradient is at least 30% different from the average porosity.

119. (New) The energy storage device of claim 110, wherein the porosity of any cross section of the first electrode perpendicular to a line connecting the center of mass of the current collector and the center of mass of the second electrode is uniform to +/- 10%.

120. (New) The energy storage device of claim 110, wherein the porosity of any cross section of the first electrode perpendicular to a line connecting the center of mass of the current collector and the center of mass of the second electrode is uniform to +/- 5%.

121. (New) The energy storage device of claim 110, wherein the porosity of any cross section of the first electrode perpendicular to a line connecting the center of mass of the current collector and the center of mass of the second electrode is uniform to +/- 3%.

122. (New) The energy storage device of claim 110, wherein the porosity of any cross section of the first electrode perpendicular to a line connecting the center of mass of the current collector and the center of mass of the second electrode is uniform to +/- 1%.

123. (New) The energy storage device of claim 110, wherein at least one of the first and second electrodes has a porosity gradient in a direction from the current collector with which the electrode is in electrical communication toward the other electrode that varies by no more than 5% at any location.

124. (New) The energy storage device of claim 110, wherein at least one of the first and second electrodes has a porosity gradient in a direction from the current collector with which the electrode is in electrical communication toward the other electrode that varies by no more than 10% at any location.